GLAST LAT Weekly Report -- week ending Nov. 17, 2000

CAL Management

Crisis in schedule for development of analog ASIC in France precipitated essentially continuous telephone conferences on mitigation plans and their impact.

On Tuesday, Nov 14, the LAT PM announced decision to initiate backup design activity at SLAC. In teleconference later that day, CEA/Saclay decided to terminate its development activity for the analog ASIC. [See note below. -- wea]

Another set of continuous telephone conferences was initiated to investigate potential alternate contributions for CEA/Saclay and to discuss technical and political impact of the ASIC decision.

[Before these "crisis" activities began, GLAST LAT management requested a meeting with Saclay senior management, which did not materialize. Nevertheless, it is not up to Saclay to unilaterally abrogate their responsibilities for the ASIC as outlined in the 1999 flight proposal. ASIC design activities have been initiated at SLAC as a means to assist Saclay in meeting their overall obligations. Discussions are underway to explore various alternatives, but no new agreement has been reached for responsibility for the remaining AFEE ASIC activities. -- wea]

Pete Jones and Fred Gross (GSFC GLAST project parts and materials experts) were invited to participate in calorimeter meeting on Monday, Nov 20th, with Per Carlson and associates from Sweden.

533Q was finally submitted to GSFC.

CAL CsI Crystal Elements

Participation to Swedish / French collaboration meeting at Paris allowing extensive exchange of informations by both sides. Work on specifications for GLAST CsI crystals (all people).

Finished conceptual design and drawings of CsI crystal test stations (NRL)

Diode specifications investigated further, actually for connection and shielding (with M. Rouger) and with B. Phlips at NRL (Ferreira, Bogaert, Acker).

Optical coupling: continued investigation into epoxy systems (Bogaert, Ferreira) for bounding CsI to diodes. New products ordered. Technical exchanges with B. Phlips.
Preparation of mechanical parts started at Polytechnique (Ferreira)

Mechanical parts of CEA Light Yield test bed designed, manufacturing in progress (Ferreira).

Phlips and Bogaert worked on details of the tests to be performed during their trip here next month

Researching soft epoxies and adhesion promoters for CsI optical bond with epoxy experts (NRL)

CAL Pre Electronics Module (Bogaert)

IN2P3 head accepts advancing funds needed for urgent work.

Much efforts invested by IN2P3 physicists to elaborate ASIC alternative organization.

Update of mass and dimensions transmitted to Neil Johnson (Ferreira)

Crystal end base line design started with manufacturing of mechanical prototypes (Ferreira).

Shake Test of Structural Model scheduled December 6 to 8 (Ferreira). Test shake plan writing in progress (Ferreira, Bogaert).

CAL Analog Front End Electronics

No activity - impact assessment of transfer of ASIC design to SLAC.

[See note above. -- wea]

CAL Balloon Flight

Iterated and refined pseudo-grid design for balloon flight with Gary and BJ at SLAC.

Started drawings for manufacturing of NRL-built parts of pseudo-grid for balloon flight

Had discussion with Hytec and looking into manufacturers for adding simple shock damping system for balloon flight per Kamae request to investigate simple improvements to protect the payload from 10g shocks.

BFEM performance -- We continue to analyze muon and electronic calibration data collected with the BFEM calorimeter at 35-40C. While a handful of channels do show a noticeable increase in noise, in general the performance is only slightly affected by the increased temperature. We will distribute a report when the study is complete.

CAL Software/Design Verification

A first batch of > 300 MC runs at various energies and incident angles completed on the computing center at Lyon, to study the CAL Recon algorithms.

Ground software, Monte Carlo -- We continue to discuss the Monte Carlo Raw

Data Definition within the CAL s/w group, the simulation group, and the core s/w group. We (NRL) are proposing a more uniform treatment of active and passive materials. We propose the requirement that full energy accounting be the standard, default running condition.

Ground software, calibration -- The Bordeaux group used glastsim to estimate the rate of interacting GCR protons that falsely suppress the ACD veto because they pass the GCR calibration event criteria (several MIPs equivalent in one and only one ACD tile). The study shows that the rate of false veto suppressions is a few Hz, which does not stress the data downlink rate.

Ground software, CAL team -- Minutes of the Wednesday CAL s/w team meeting can be found at http://gamma.nrl.navy.mil/glast/calsw/nov00/minutes15nov00.htm. It contains pointers to discussion of the Monte Carlo data definition and the calibration study.

Initiated investigations on background and triggering issues in support of Steve Ritz's backgrounds committee.
